Part 8 · Number Search & Magic Square

Work out each answer below, then find it hidden in the digit grid — across, down, diagonally or backwards.

0	9	3	1	8	4	5	6	1	3
0	0	8	3	1	6	7	1	6	2
8	5	9	8	2	0	8	2	8	1
6	9	6	9	7	7	9	6	8	0
0	1	3	4	5	5	6	7	1	4
1	4	0	6	3	5	5	5	8	9
8	2	0	6	6	0	8	0	3	6
0	6	3	9	1	1	8	3	2	1
4	0	6	4	7	5	9	0	8	7
5	3	5	2	4	7	7	7	3	2

☐ 10	☐ 0	☐ 4	☐ 7	☐ 2
☐ 3	☐ 1	☐ 6		

Magic Square — every row, column and diagonal adds to the same total.

8		**6**
3		**7**
		2

Magic constant: 15. Fill the empty cells.

Concept Bingo

Fill the empty grid below with any 16 terms from the bank — in any order, one per box. Then work down the clue list: each clue describes one term without naming it. Cross off a box only when you are sure which term its clue is describing. Get four crossed in a row, column or diagonal and you have bingo.

Term bank — choose any 16:

POLYNOMIAL	BINOMIAL	TRINOMIAL	MONOMIAL
ZERO	DEGREE	LINEAR	QUADRATIC
CUBIC	COEFFICIENT	CONSTANT	PARABOLA
FACTOR	ALPHA	BETA	GAMMA
GRAPH	SPLITTING		

Your bingo card:

Clue list — read each clue and find the term it describes:

① This term describes an expression like $x^2 - 3x - 4$.

② A polynomial with two terms, e.g. $4x + 2$.

③ A polynomial with three terms, e.g. $x^2 - 3x - 4$.

④ A polynomial with just one term, e.g. $5x^2$.

⑤ A value of x where $p(x) = 0$.

⑥ The highest power of x present in a polynomial.

⑦ A degree-1 polynomial is called this.

⑧ A degree-2 polynomial is called this.

⑨ A degree-3 polynomial is called this.

⑩ The number multiplying a power of x.

 The term with no x attached.

 The curved graph shape of a quadratic.

- Something that divides a polynomial exactly, e.g. $(x+2)$ is one of x^2+3x+2.
- The Greek letter used for one zero of a quadratic.
- The Greek letter used for the second zero of a quadratic.
- The Greek letter used for the third zero of a cubic.
- The picture you draw of $y = p(x)$.
- The middle-term method used to factorise a quadratic.

Every quadratic and cubic you meet from here on has its zeroes hiding in plain sight inside its coefficients — you now know exactly how to find them.